



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

~~SECRET~~ Inherent Application of

Ming Bo Wang et al.

Application No.: 10/780,638

Filed: February 19, 2004

For: EFFICIENT GENE SILENCING IN
PLANTS USING SHORT DSRNA
SEQUENCES

Group Art Unit: 1638

Examiner: Kathy Kingdon Worley

Confirmation No.: 2125

FIRST INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, the accompanying information is being submitted in accordance with 37 C.F.R. §§ 1.97 and 1.98.

Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed. However, copies of the listed U.S. patents and U.S. patent application publications are not enclosed since it is no longer required according to the July 11, 2003 waiver of the requirement for copies of cited U.S. patents and U.S. patent application publications in national patent applications filed after June 30, 2003 and international applications entering the national stage under 35 U.S.C. § 371 after June 30, 2003.

Also enclosed herewith are copies of the International Search Report and the Supplementary European Search Report in connection with the international application.

The documents are being submitted within three (3) months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later. Since these documents are being filed within the time period set forth in 37 C.F.R. § 1.97(b), no fee or statement is required.

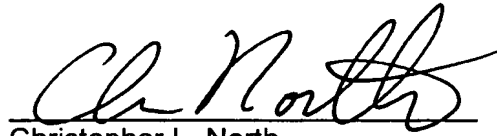
To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: August 9, 2006

By:

A handwritten signature in cursive script, appearing to read "Ch North", written over a horizontal line.

Christopher L. North
Registration No. 50433

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Alexandria, VA 22313-1404
703 836 6620



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)	Group Art Unit: 1638
Ming Bo Wang et al.)	Examiner: Kathy Kingdon Worley
Application No.: 10/780,638)	Confirmation No.: 2125
Filing Date: February 19, 2004)	
Title: EFFICIENT GENE SILENCING IN)	
PLANTS USING SHORT DSRNA)	
SEQUENCES)	

**FIRST
INFORMATION DISCLOSURE STATEMENT
TRANSMITTAL LETTER**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is a FIRST Information Disclosure Statement (IDS) and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of 180 as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e), and the fee of 180 as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge _____ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of _____ is enclosed for the fee due.
- ☐ Charge _____ to credit card for the fee due. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BUCHANAN INGERSOLL AND ROONEY PC

Date August 9, 2006

By: 

Christopher L. North
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Alexandria, VA 22313-1404
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FIRST
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

Application Number	10/780,638
Filing Date	February 19, 2004
First Named Inventor	Ming Bo Wang et al.
Examiner Name	Cathy Kingdon Worley
Attorney Docket No.	1021565-000156

U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
	5,354,854		BOURQUE et al.	10-11-1994
	6,146,886		THOMPSON	11-14-2000

FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	STATUS						
					Translation	Partial Translation	Eng. Lang. Summary	Search Report	IPER	Abstract	Cited in Spec
	02/29028	A2	International	04-11-2002							X
	0 387 775	B1	EP	03-13-1990							X
	02/059294	A1	International	08-01-2002				X			
	00/63397	A2	International	10-26-2000				X			
	99/53050	A1	International	10-21-1999				X			
	98/530083	A1	International	11-26-1998				X			

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	BOURQUE et al., "Suppression of gene expression in plant cells utilizing antisense sequences transcribed by RNA polymerase III," <i>Plant Molecular Biology</i> , 1992, vol. 19, pp. 641-647, Kluwer Academic Publishers, Belgium.		
	BRUMMELKAMP et al., "A System for Stable Expression of Short Interfering RNAs in Mammalian Cells," <i>Science</i> , 2002, vol. 296, pp. 550-552, American Association for the Advancement of Science, Washington, D.C..		
	ELBASHIR et al., "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells," <i>Nature</i> , 2001, vol. 411, pp. 494-498, Nature Publishing Group, London, England.		
	FIRE et al., "Potent and specific genetic interference by double-stranded RNA in <i>Caenorhabditis elegans</i> ," <i>Nature</i> , 1998, vol. 391, pp. 806-811, Nature Publishing Group, London, England.		
	HAMILTON et al., "A transgene with repeated DNA causes high frequency, post-transcriptional suppression of ACC-oxidase gene expression in tomato," <i>The Plant Journal</i> , 1998, vol. 15, no. 6, pp. 737-746, Blackwell Sciences, Oxford, England.		
	MIYAGISHI et al., "U6 promoter - driven siRNAs with four uridine 3' overhangs efficiently suppress targeted gene expression in mammalian cells," <i>Nature Biotechnology</i> , 2002, vol. 20, pp. 497-500, Nature America, New York, New York.		
	PADDISON et al., "Short hairpin RNAs (shRNAs) induce sequence-specific silencing in mammalian cells," <i>Genes & Development</i> , 2002, vol. 16, pp. 948-958, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York.		
	PAUL et al., "Effective expression of small interfering RNA in human cells," <i>Nature Biotechnology</i> , 2002, vol. 20, pp. 505-508, Nature America, New York, New York.		
	SUI et al., "A DNA vector-based RNAi technology to suppress gene expression in mammalian		
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FIRST
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

Application Number	10/780,638
Filing Date	February 19, 2004
First Named Inventor	Ming Bo Wang et al.
Examiner Name	Cathy Kingdon Worley
Attorney Docket No.	1021565-000156

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	cells," <i>PNAS</i> , vol. 99, no. 8, National Academy of Sciences, Washington, D.C.
	WATERHOUSE et al., "Virus resistance and gene silencing in plants can be induced by simultaneous expression of sense and antisense RNA," <i>Proc. Natl. Acad. Sci. USA</i> , 1998, vol. 95, pp. 13959-13964, The National Academy of Sciences, Washington, D.C.
	YUKAWA et al., "Plant 7SL RNA and tRNATyr genes with inserted antisense sequences are efficiently expressed in an in vitro transcription system from <i>Nicotiana tabacum</i> cells," <i>Plant Molecular Biology</i> , 2002, vol. 50, pp. 713-723, Kluwer Academic Publishers, The Netherlands.
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	WANG et al., "Application of gene silencing in plants," <i>Current Opinion in Plant Biology</i> , 2001, vol. 5, pp. 146-150, Current Biology Ltd., London, England.
	WATERHOUSE et al., "Exploring Plant Genomes by RNA-Induced Gene Silencing," <i>Nature</i> , 2003, vol. 4, pp. 29-38, Nature Publishing Group, London, England.
	KLAHRE et al., "High molecular weight RNAs and small interfering RNAs induce systemic posttranscriptional gene silencing in plants," <i>PNAS</i> , 2002, vol. 99, no. 18, pp. 11981-11986, The National Academy of Sciences, Washington, D.C.
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	Gene Therapy Systems Inc. Catalog at index and Tables 1 and 2 (2002) (http://www.genetherapysystems.com/catalog/index.cfm) (accessed 18 March 2004).
	Ambion Inc. RNA interference and gene silencing-history and overview (May 20, 2002) (http://www.ambion.com/techlib/hottopics/rnai/may2002_print.html) (accessed 2 March 2004).

Examiner
SignatureDate
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